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(54) Box with improved aesthetic quality

(57) The present invention relates to a box with improved aesthetic quality.

A box blank comprising a flap or panel, the flap or panel having side surfaces each of which has an edge along which the flap or panel is hinged to the rest of the blank, and the flap or panel having an edge surface joining the side surfaces, wherein indicia to identify the blank are disposed on the edge surface.

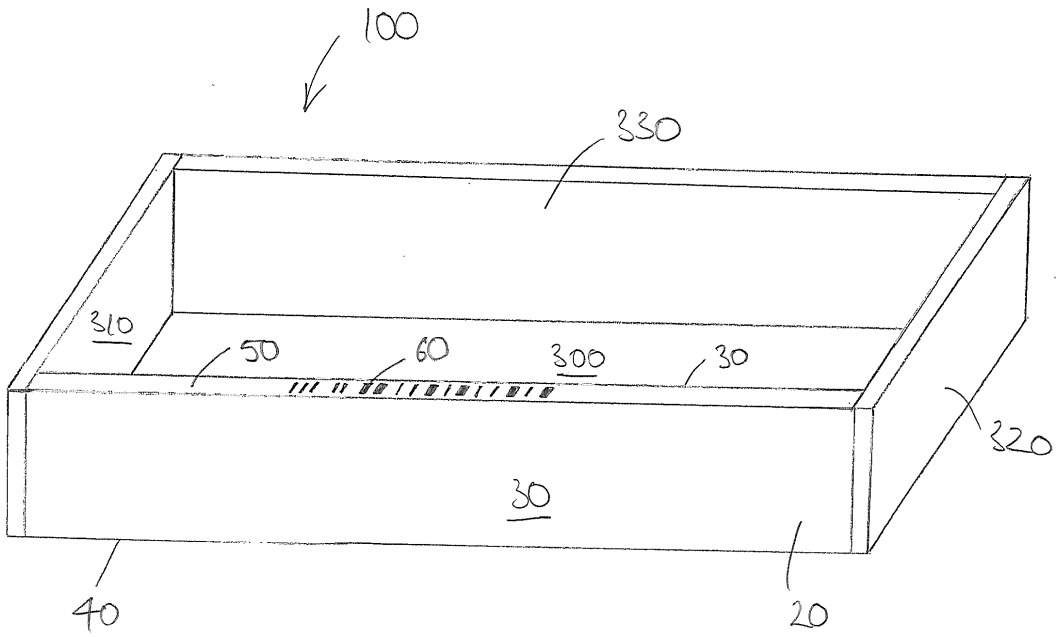

Fig 7

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Description

[0001] The present invention relates to a box with improved aesthetic quality.

[0002] During the production of boxes for packaging cosmetic or fragrance products, box blanks are typically provided with a barcode or other machine-readable code to verify the authenticity of the blank, in order to prevent counterfeiting and to allow easy tracking of the blanks. In this way a packaging company that receives a shipment of blanks from the blank manufacturer can use the barcode to verify that the blanks are indeed from blank manufacturer.

[0003] Usually, a barcode is disposed on a part of the blank that will form the main outer surface of a panel of the box. This allows a person wishing to use a barcode scanner to scan the barcode to ascertain easily the position of the barcode. This also allows the barcode to be scanned throughout the production of the box, even when the box has been sealed.

[0004] However, the typical blanks referred to above have the drawback that the barcodes are visible to the end user and such barcodes can be unsightly, especially if the boxes are for packaging luxury products.

[0005] UK Patent No. 962,330 discloses a carton blank in which indicia are provided on flaps of the carton blank. One of the flaps on which indicia are provided is affixed with glue to another part of the blank whereby the indicia are concealed, and thus the indicia are not visible to the end user. The other flap on which indicia are provided is tucked into the carton when the assembled carton is closed and so the indicia are also not visible to the end user. However, when the flap is untucked the indicia are visible.

[0006] The aim of the present invention is overcome or mitigate at least one of the disadvantages of the prior art.

[0007] A first aspect of the present invention provides a box blank, the box blank comprising a flap or panel, the flap or panel having side surfaces each of which has an edge along which the flap or panel is hinged to the rest of the blank, and the flap or panel having an edge surface joining the side surfaces, wherein indicia to identify the blank are disposed on the edge surface.

[0008] According to the first aspect, the indicia are disposed on the edge surface. In this way, the indicia are less obvious to the end user in comparison to when the indicia are disposed on a part of the blank that will form the main inner or outer surface of a panel or wall of the box. In addition, when the indicia are disposed on the edge surface, the indicia may be completely hidden by another part of the box when the box is sealed, thus improving the aesthetic quality of the box.

[0009] The indicia are provided so that the receiver of the blank (e.g. the assembler of the box) can identify the blank to verify the authenticity of the blank. In addition, the receiver of the box is also able to verify the authenticity of the box produced from the blank. Disposing the indicia on the edge surface provides the added advantage that the indicia are less obvious to the end user and so a potential forger is less likely to notice that anti-counterfeiting measures have been taken. Hence the invention provides a blank with improved aesthetic quality which still provides anti-counterfeiting meatures.

[0010] Preferably, the side surfaces provide the largest surfaces of the flap or panel.

[0011] Preferably, the edge surface is provided at a free end of the flap. The free end of the flap is an end that is not hinged to the rest of the blank.

[0012] Preferably, the flap or panel is hinged to the rest of the blank along only one of its edges. Alternatively, the flap or panel may be hinged to the rest of the blank along a plurality of its edges.

[0013] Preferably, the flap or panel is a flap. Preferably, the flap is a component for lying against another component such as a panel, for fixing to the other component. Preferably, the flap is smaller in size than the other component.

[0014] Preferably, the indicia are disposed away from the edges along which the flap or panel is hinged to the rest of the blank.

[0015] Preferably, the edge surface is away from the edges along which the flap or panel is hinged to the rest of the blank. This allows a person easier access to the edge surface and indicia when the box is assembled in comparison to an edge surface adjacent to the edges along which the flap or panel is hinged to the rest of the blank. Typically, an edge surface adjacent to the edges along which the flap is hinged to the rest of the blank is adhered to another part of the blank during assembly of the box. In that case, it may not be possible for a person to have access to the indicia when the box is assembled on such an edge surface.

[0016] Preferably, the edge surface provides an edge of the flap or panel, on which the indicia are disposed, that is furthest from the edges along which the flap or panel is hinged to the rest of the blank. This allows a person easier access to the edge surface and indicia when the box is assembled. In addition, the edge of the flap that is furthest from the edges along which the flap is hinged to the rest of the blank may not be adhered to the rest of the box to seal the box until the products have been placed within the box. By disposing indicia on this edge surface, the indicia can be used to identify the blank even when products have been placed within the box.

[0017] Preferably, the indicia comprise a machine-readable code. This allows quick and accurate reading of the indicia.

[0018] Preferably, the indicia comprise a barcode.

[0019] Preferably, the indicia comprise a data matrix.

[0020] Preferably, the indicia comprise a substance only visible under UV (ultraviolet) light. Preferably, the substance is an ink.

[0021] A suitable substance is butanone, methylpentan - 2 - one (methyl isobutyl ketone), esfluoro tetrabutylammonium phosphate 2.5, and thiophenediylbis (5 - tert

- butyl - 1.3 - benzoaxole).

[0022] Alternatively, the indicia may comprise a substance visible under normal light.

[0023] Preferably, the flap has one or more, more preferably two, additional edge surfaces joining the side surfaces.

[0024] Preferably, the additional edge surface or surfaces is or are to be provided with adhesive to assemble a box from the blank.

[0025] Preferably, the additional edge surface or surfaces is or are obscured when a box is assembled from the blank, more preferably obscured by another flap or flaps of the blank.

[0026] Preferably, a box blank according to the first aspect is provided, wherein:

the flap is a first flap;
the box blank comprises a second flap having side surfaces each of which has an edge along which the second flap is hinged to the rest of the blank;
the second flap has an edge surface joining the side surfaces;
the first flap has an additional edge surface joining the side surfaces; and
the additional edge surface of the first flap is provided to be adhered to the edge surface of the second flap or a side surface of the second flap when the box is assembled.

[0027] This provides that the edge surface of the first flap, on which the indicia are disposed, is not adhered to edge surface of the second flap when the box is assembled. Therefore, the indicia can be used to identify the blank even when the box is at least partially assembled.

[0028] Preferably, a box blank according to the first aspect is provided, wherein:

the box blank comprises a third flap having side surfaces each of which has an edge along which the third flap is hinged to the rest of the blank;
the third flap has an edge surface joining the side surfaces;
the first flap has an further additional edge surface joining the side surfaces; and
the further additional edge surface of the first flap is provided to be adhered to the edge surface of the third flap or a side surface of the third flap when the box is assembled.

[0029] This provides that the edge surface of the first flap, on which the indicia are disposed, is not adhered to edge surface of the second or third flap when the box is assembled. Therefore, the indicia can be used to identify the blank even when the box is at least partially assembled.

[0030] The blank may have more than one edge surface joining the side surface. The indicia may be provided on more than one of the edge surfaces.

[0031] The blank may comprise more than one flap or panel, each having side surfaces, each side surface having an edge along the respective flap or panel is hinged to the rest of the blank. The indicia may be provided on more than one of the edge surfaces of respective blanks.

[0032] The indicia may be disposed on more than one surface of the flap or panel, for example the edge surface and another surface. The indicia may be provided on two or more flaps or panels.

[0033] Preferably, the flap or panel is made of cardboard. Preferably, at least part of the blank is made of cardboard.

[0034] A second aspect of the invention provides a method of marking a box blank, the blank comprising a flap or panel, the flap or panel having side surfaces each of which has an edge along which the flap or panel is hinged to the rest of the blank, and the flap or panel having an edge surface joining the side surfaces, wherein the method comprises disposing indicia to identify the blank on the edge surface.

[0035] In the method of the second aspect, the box blank may comprise one or more of the above-mentioned preferable features of the first aspect.

[0036] Preferably, the indicia are disposed by inkjet printing.

[0037] A third aspect of the invention provides a method of identifying a box blank, the blank comprising a flap or panel, the flap or panel having side surfaces each of which has an edge along which the flap or panel is hinged to the rest of the blank, and the flap or panel having an edge surface joining the side surfaces, wherein indicia to identify the blank are disposed on the edge surface, and wherein the method comprises identifying the box blank from the indicia.

[0038] In the method of the third aspect, the box blank may comprise one or more of the above-mentioned preferable features of the first aspect.

[0039] A fourth aspect of the invention provides a box comprising a flap or panel, the flap or panel having side surfaces each of which has an edge along which the flap or panel is hinged to the rest of the box, and the flap or panel having an edge surface joining the side surfaces, wherein indicia to identify the box are disposed on the edge surface.

[0040] The fourth aspect provides a box formed from the blank of the first aspect.

[0041] In the box of the fourth aspect, the box may comprise one or more of the above-mentioned preferable features of the first aspect.

[0042] Preferred embodiments of the invention will now be described, by way of example only, with reference to the drawings in which:

Figure 1 is a plan view of a box blank in unfolded condition according to a first embodiment of the invention;

Figure 2 is a plan view of a box blank in unfolded

condition according to a second aspect of the invention;

Figure 3 is an isometric view of the box blank of Figure 1;

Figure 4 is an elevation view of the box blank of Figure 1;

Figure 5 is an isometric view of the box blank of Figure 2;

Figure 6 is an elevation view of the box blank of Figure 2;

Figure 7 is an isometric view of a box assembled from the box blank of Figure 2.

[0043] In Figures 3 to 7 the thickness of the material of the blank or box is shown having a thickness which is at enlarged scale compared to the rest of each Figure to illustrate clearly where the indicia are disposed.

[0044] Referring to Figs. 1 to 6, a box blank 10 comprises a flap 20. The flap 20 has side surfaces 30. Each of the side surfaces 30 has an edge 40 along which the flap 20 is hinged to the rest of the blank 10. The flap 20 has an edge surface 50 joining the side surfaces 30. Indicia 60 to identify the blank 10 are disposed on the edge surface 50.

[0045] As best shown in Figs. 3 to 6, side surfaces 30 of the flap 20 are provided on opposite sides of the flap 20. The side surfaces 30 are planar and substantially parallel to one another. The side surfaces 30 provide the largest surfaces of the flap 20. In the second embodiment, as is clear from Figs. 5 and 6, the side surfaces 30 are continuous with the respective inner and outer surfaces of a box assembled from the blank 10.

[0046] The edge surface 50 is provided at a free end of the flap 20, i.e. the end that is not hinged to the rest of the blank 10. The edge surface 50 is planar at the free end of the flap 20.

[0047] In the first and second embodiments, the indicia 60 are disposed along a direction that is substantially parallel with the planes of the side surfaces 30. Alternatively, the indicia may be disposed along a direction that is substantially orthogonal to the planes of the side surfaces 30, or along a different direction.

[0048] Referring to Figs. 1 to 4, the blank 10 comprises flaps 20, 200, 210, 220, 230 and 240. Flaps 200 and 210 are identical but provided at different positions on the blank 10. Flap 220 is identical to flap 30 except that flap 220 does not have indicia disposed on it, and flap 220 is provides at a different position on the blank 10 to flap 30. Four flaps 240 are provided in the first embodiment.

[0049] The blank 10 further comprises panels 250, 260, 270 and 280.

[0050] Flap 20 is hinged to flap 200, which is itself hinged to panel 250. Similarly, flap 220 is hinged to flap 210, which is itself hinged to panel 280.

[0051] In the first embodiment, indicia 60 are disposed on the edge surface 50 to allow easy access to the indicia 60 even when a box is assembled from the blank 10. However, indicia may be disposed on an edge surface of one or more of flaps 20, 200, 210, 220, 230 and 240 or panels 250, 260 and 280.

[0052] Flap 230 is hinged to panel 280. Two of flaps 240 are hinged to panel 270, and the other two flaps 240 are hinged to panel 260.

[0053] Panel 250 is hinged to panel 260 along one edge of panel 250, and panel 250 is hinged to panel 270 along another edge of panel 250, preferably its opposite edge. Panel 280 is hinged to panel 270 along one edge, and panel 280 is hinged to flap 230 along another edge of panel 280, preferably its opposite edge.

[0054] In the first and second embodiments, the edge surface 50 provides an edge of the flap 20 that is away from and furthest from the edges 40 along which the flap 20 is hinged to the rest of the blank 10. In the first and second embodiments, the indicia 60 are disposed on the edge of the flap 20 that is furthest from the edges 40 along which the flap 20 is hinged to the rest of the blank 10.

[0055] In the first and second embodiments, the indicia 60 comprise a barcode. Alternatively, the indicia 60 may comprise another machine-readable code such as a data matrix.

[0056] In the first and second embodiments, the blank 10 is made of cardboard.

[0057] In the first and second embodiments, the indicia 60 are disposed by inkjet printing.

[0058] Referring to Figs. 5 to 6, the blank 10 comprises flaps 20, 310, 320, 330. Flaps 310 and 320 are identical but provided at different positions on the blank 10. Flap 330 is identical to flap 20 except that flap 330 does not have indicia disposed on it, and flap 330 is provides at a different position on the blank 10 to flap 20.

[0059] The blank 10 further comprises panel 300.

[0060] Flap 20 is hinged to panel 300. Similarly, flap 330 is hinged to panel 300. Flap 30 is hinged to panel 300 along one edge of panel 300, and flap 330 is hinged to panel 300 along another edge of panel 300, preferably its opposite edge.

[0061] Flap 310 is hinged to panel 300. Similarly, flap 320 is hinged to panel 300. Flap 310 is hinged to panel 300 along one edge of panel 300, and flap 320 is hinged to panel 300 along another edge of panel 300, preferably its opposite edge.

[0062] Flap 310 has side surfaces 312 each of which has an edge 314 along which the flap 310 is hinged to the rest of the blank (in particular, to the panel 300). Flap 310 has an edge surface 316 joining the side surfaces 312. The flap 30 has an additional edge surface 70 joining the side surfaces 30. The additional edge surface 70 of the flap 20 is provided to be joined to the edge surface 316 of flap 310, for example by adhesive tape, when the box is assembled. Alternatively, the edge surface 70 may

be adhered to a side surface 312 of flap 310, as shown in Fig. 7. In the same ways it is possible to adhere flap 20 to flap 320.

[0063] The edge surface 50 is long in comparison to the edge surfaces joining the edges 40 to the edge surface 50.

[0064] In the first and second embodiments, the edge of the flap 20 that is furthest from the edges 40 along which the flap 20 is hinged to the rest of the blank 10 is not adhered to the rest of the box to seal the box until the products have been placed within the box. Instead, in the first embodiment flap 230 is adhered to panel 260 to assemble the box, and in the second embodiment the short edge surfaces of flap 20 are adhered, respectively, to a short edge surface of flap 310 and a short edge surface of flap 320. By disposing indicia on edge surface 50, the indicia 60 can be used to identify the blank even when products have been placed within the box because the indicia 60 are not disposed on an edge surfaces on which adhesive is also deposited.

[0065] The indicia 60 may be disposed by any suitable method known in the art, e.g. by being printed by an industrial inkjet printer.

[0066] Referring to Fig. 7 a box 10 is assembled from the box blank 10 of the second embodiment, that shown in Figs. 2 and 5 to 6. The edge surface 50 forms the uppermost rim of the box 100. This provides easy access to the indicia 60, without allowing the indicia 60 to spoil the appearance of the main inner or outer surfaces of flaps 20, 310, 320 or 330 or panel 300. The inner and outer surfaces of flaps 20, 310, 320, 330 and panel 300 form the main inner and outer surfaces of the walls of the box 100.

[0067] When the box 100 is sealed with suitable a lid, the indicia 60 are not visible from the outside. In addition, even when the box 100 is not provided with a lid, the indicia 60 may be less visible than when provided on an inner surface of the box 100 i.e. an inner surface of flaps 20, 310, 320 or 330 or panel 300.

[0068] The indicia 60 are preferably disposed while the blank 10 is in its unfolded condition, as shown in Figs. 1 and 2, so that the blank 10 may be identified from the indicia 60. Alternatively, the indicia 60 may be disposed onto the box 100 once the blank 10 has been folded into the box 100.

[0069] The blank 10 or box 100 may be identified from the indicia 60 by any known method of the art, e.g. by use of a barcode scanner or data matrix scanner.

[0070] The embodiments described above are exemplary and explanatory and are not intended the limit the scope of protection, which is defined by the appended claims. The person skilled in the art would contemplate variations and modifications to the embodiments described above without departing from the scope of protection defined by the appended claims.

Claims

1. A box blank comprising a flap or panel, the flap or panel having side surfaces each of which has an edge along which the flap or panel is hinged to the rest of the blank, and the flap or panel having an edge surface joining the side surfaces, wherein indicia to identify the blank are disposed on the edge surface.

2. A box blank according to claim 1, wherein the edge surface is away from the edges along which the flap or panel is hinged to the rest of the blank.

3. A box blank according to claim 1 or 2, wherein the edge surface provides an edge of the flap or panel, on which the indicia are disposed, that is furthest from the edges along which the flap or panel is hinged to the rest of the blank.

4. A box blank according to claim 1, 2 or 3, wherein the indicia comprise a machine-readable code.

5. A box blank according to any preceding claim, wherein the indicia comprise a barcode.

6. A box blank according to any one of claims 1 to 4, wherein the indicia comprise a data matrix.

7. A box blank according to any preceding claim, wherein the indicia comprise a substance only visible under UV light.

8. A method of marking a box blank, the blank comprising a flap or panel, the flap or panel having side surfaces each of which has an edge along which the flap or panel is hinged to the rest of the blank, and the flap or panel having an edge surface joining the side surfaces, wherein the method comprises disposing indicia to identify the blank on the edge surface.

9. A method of identifying a box blank, the blank comprising a flap or panel, the flap or panel having side surfaces each of which has an edge along which the flap or panel is hinged to the rest of the blank, and the flap or panel having an edge surface joining the side surfaces, wherein indicia to identify the blank are disposed on the edge surface, and wherein the method comprises identifying the box blank from the indicia.

10. A method according to claim 9, comprising providing a box assembled from the blank, and identifying the box blank from the indicia.

11. A box comprising a flap or panel, the flap or panel having side surfaces each of which has an edge

along which the flap or panel is hinged to the rest of the box, and the flap or panel having an edge surface joining the side surfaces, wherein indicia to identify the box are disposed on the edge surface.

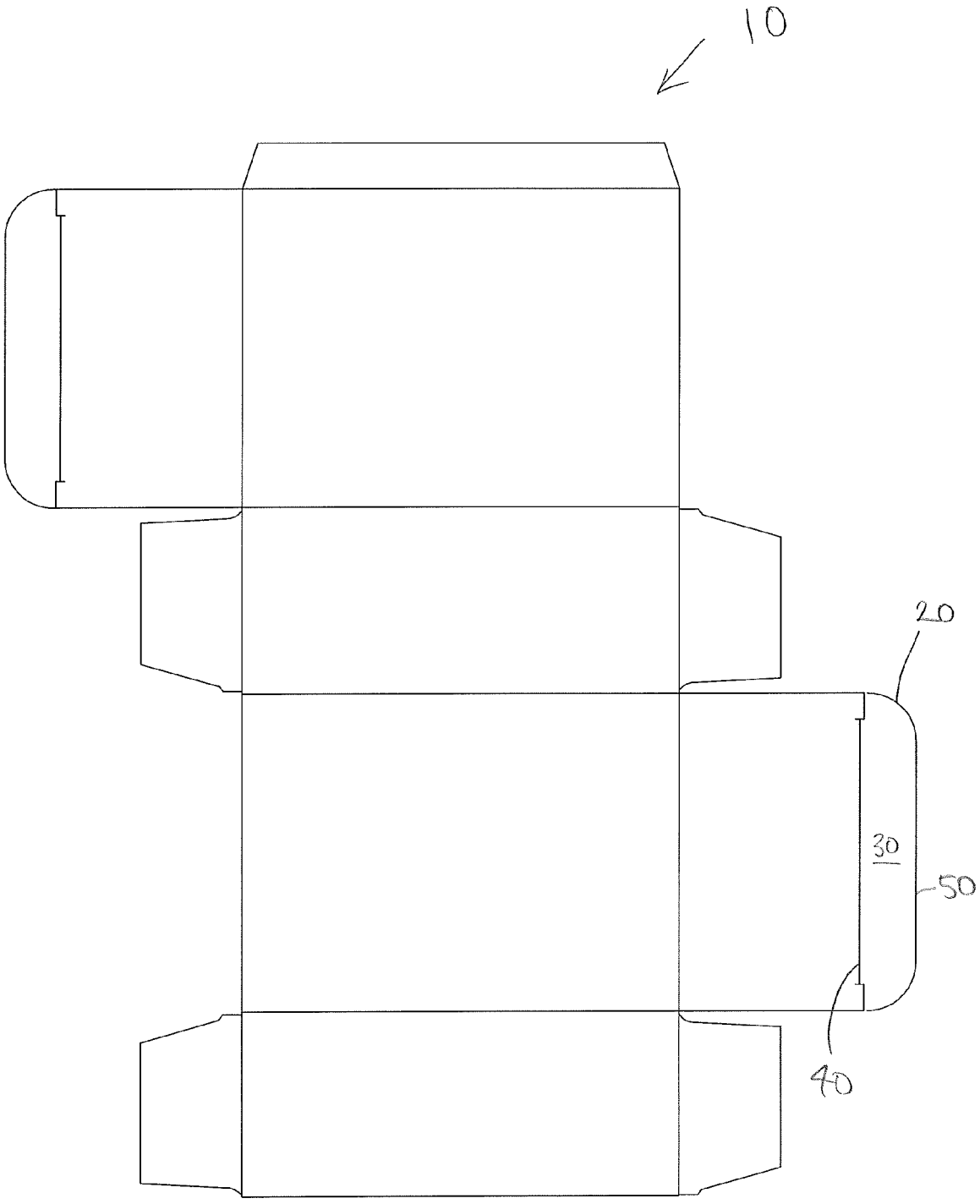

Fig. 1

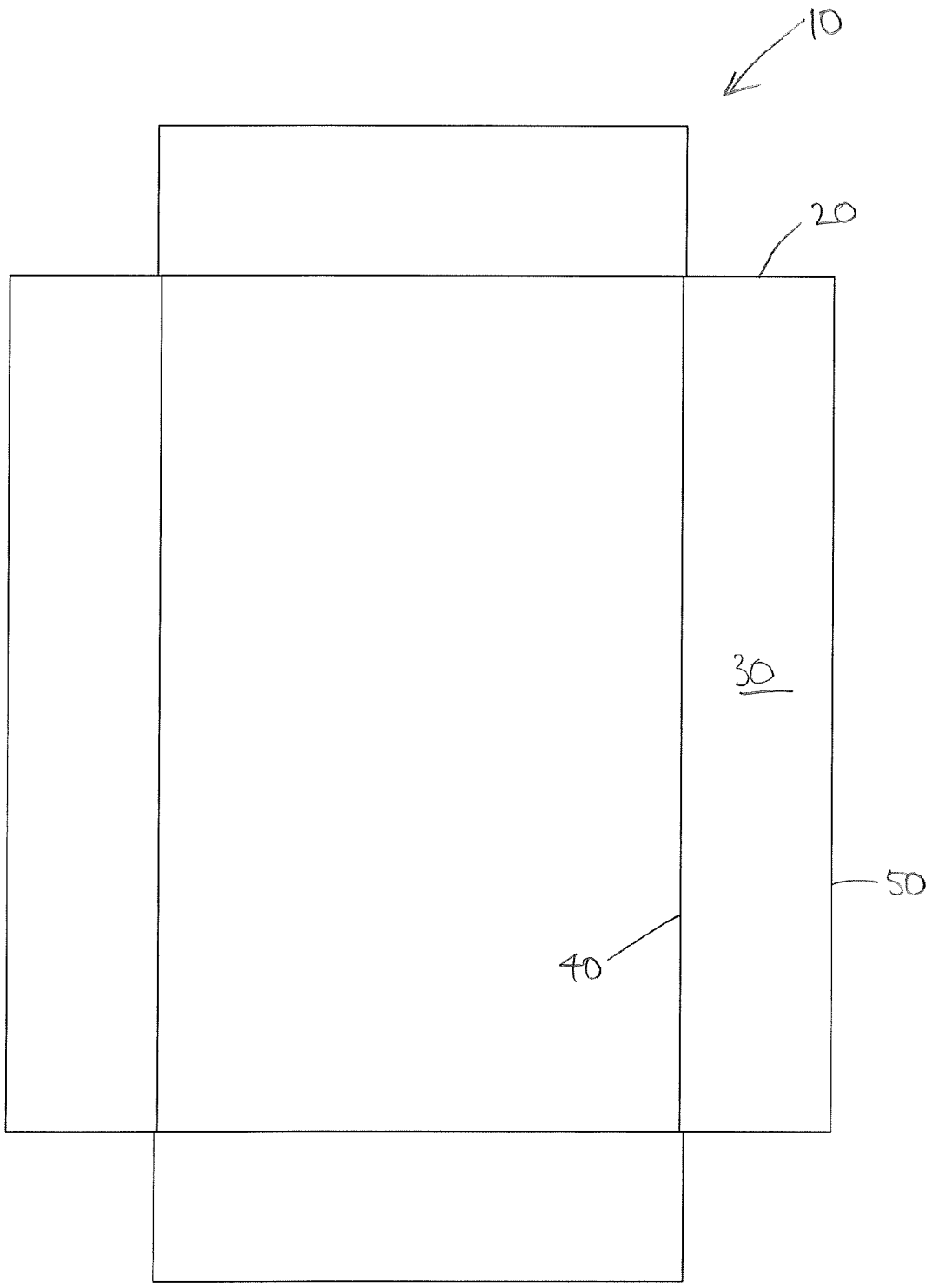

Fig. 2

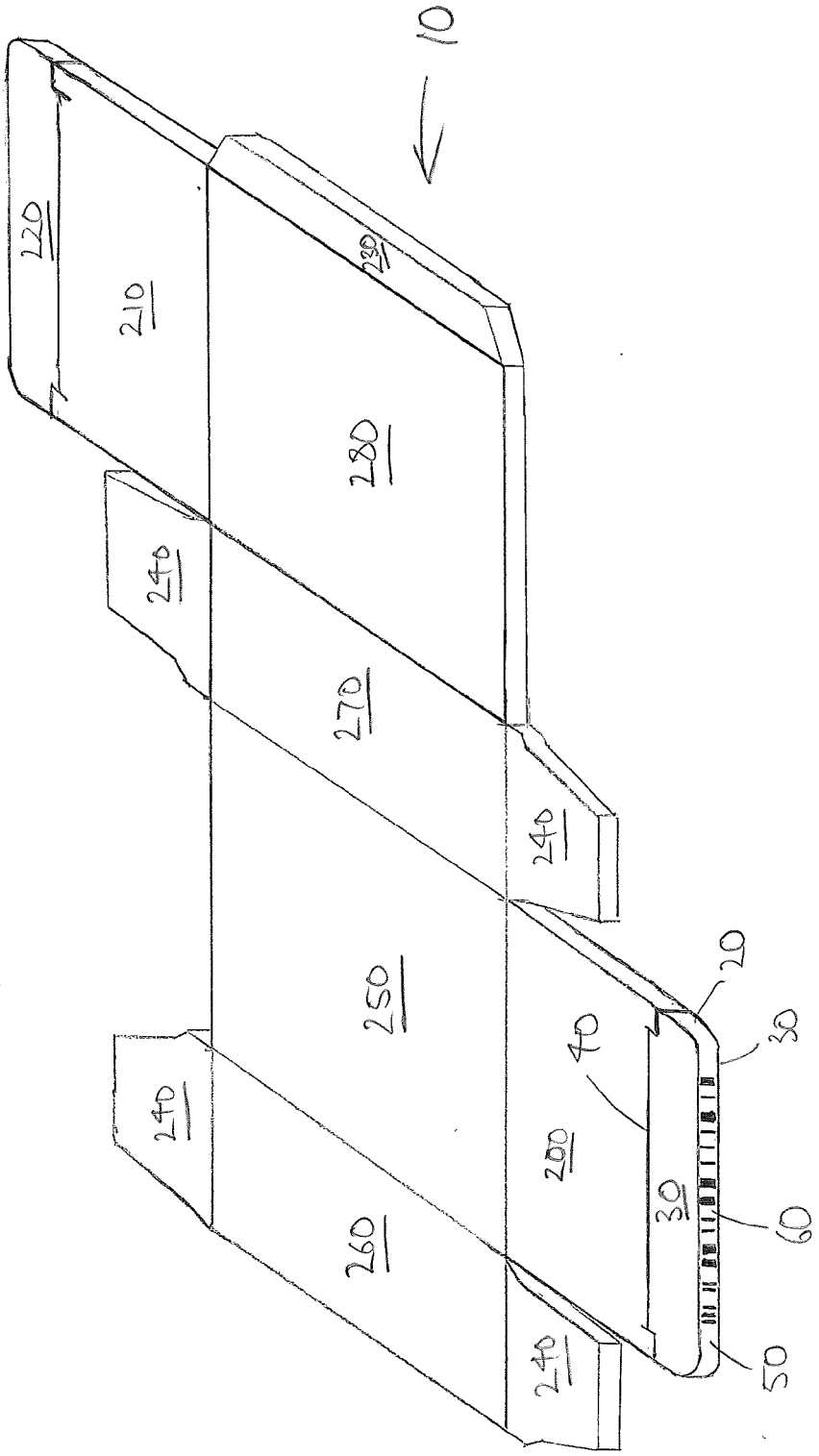
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Fig 2

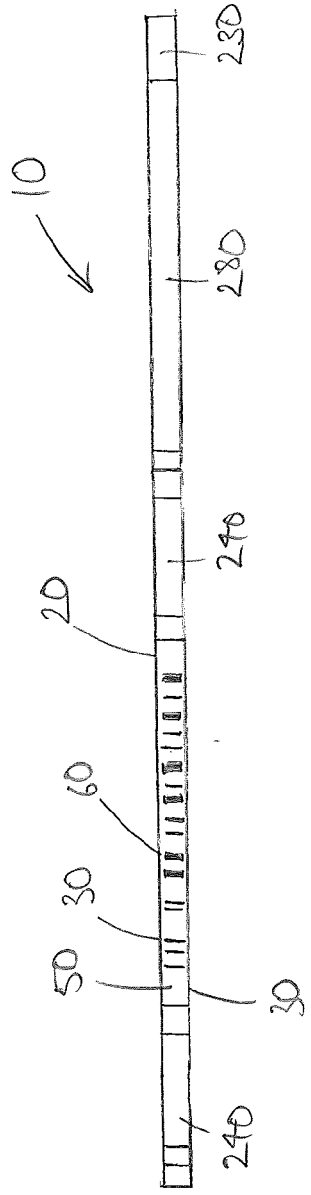

Fig 4

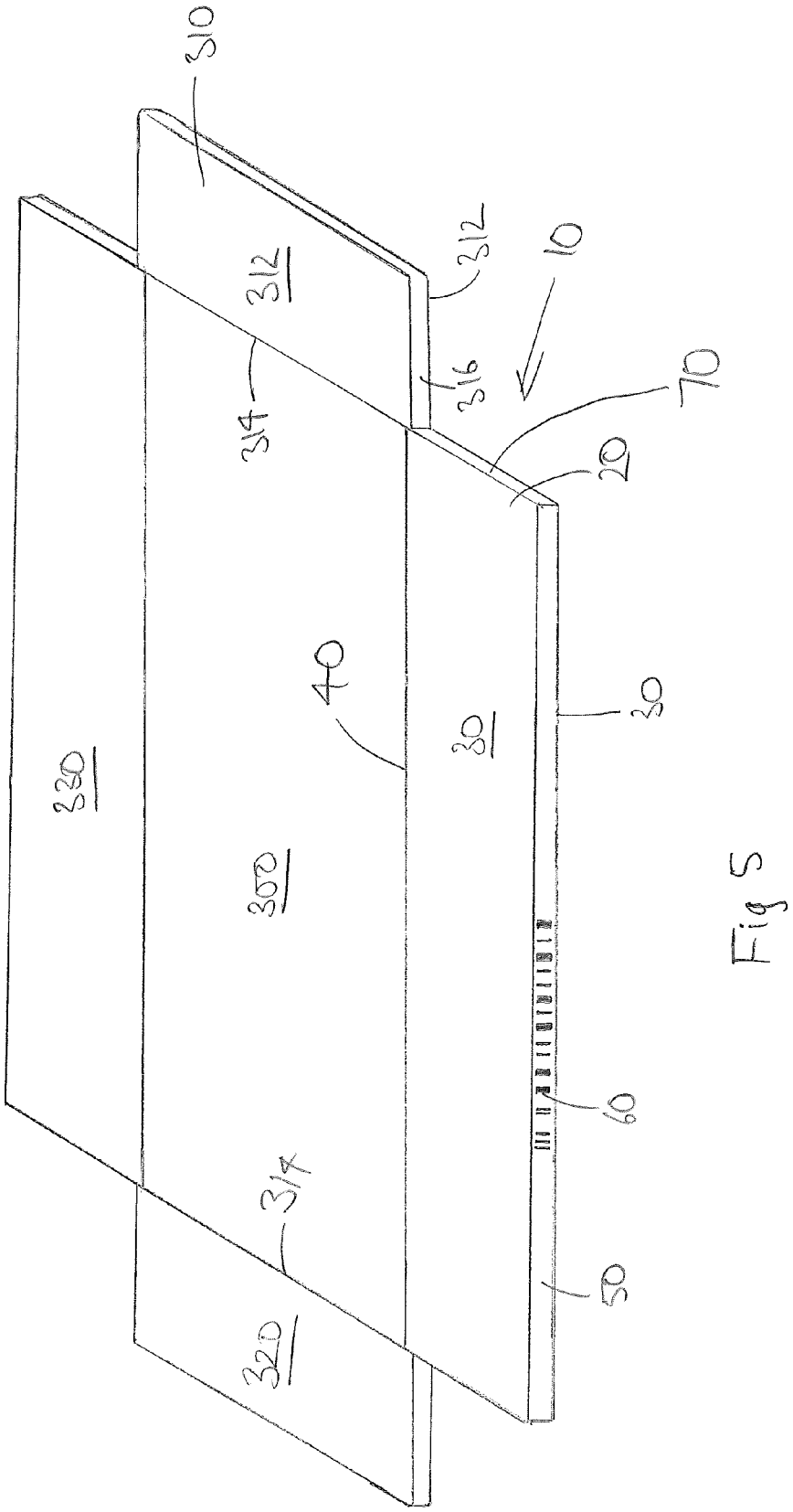

Fig 5

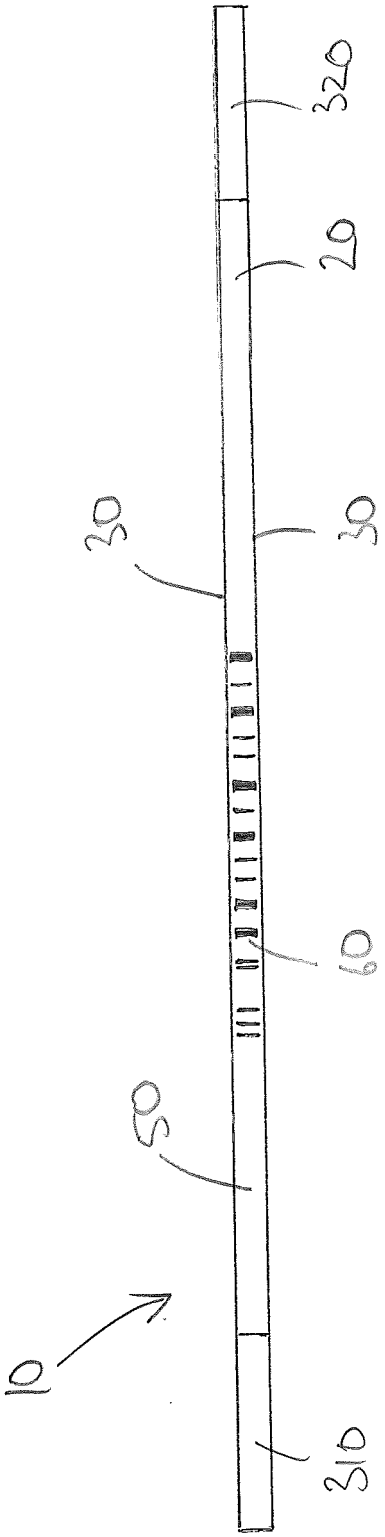

Fig 6

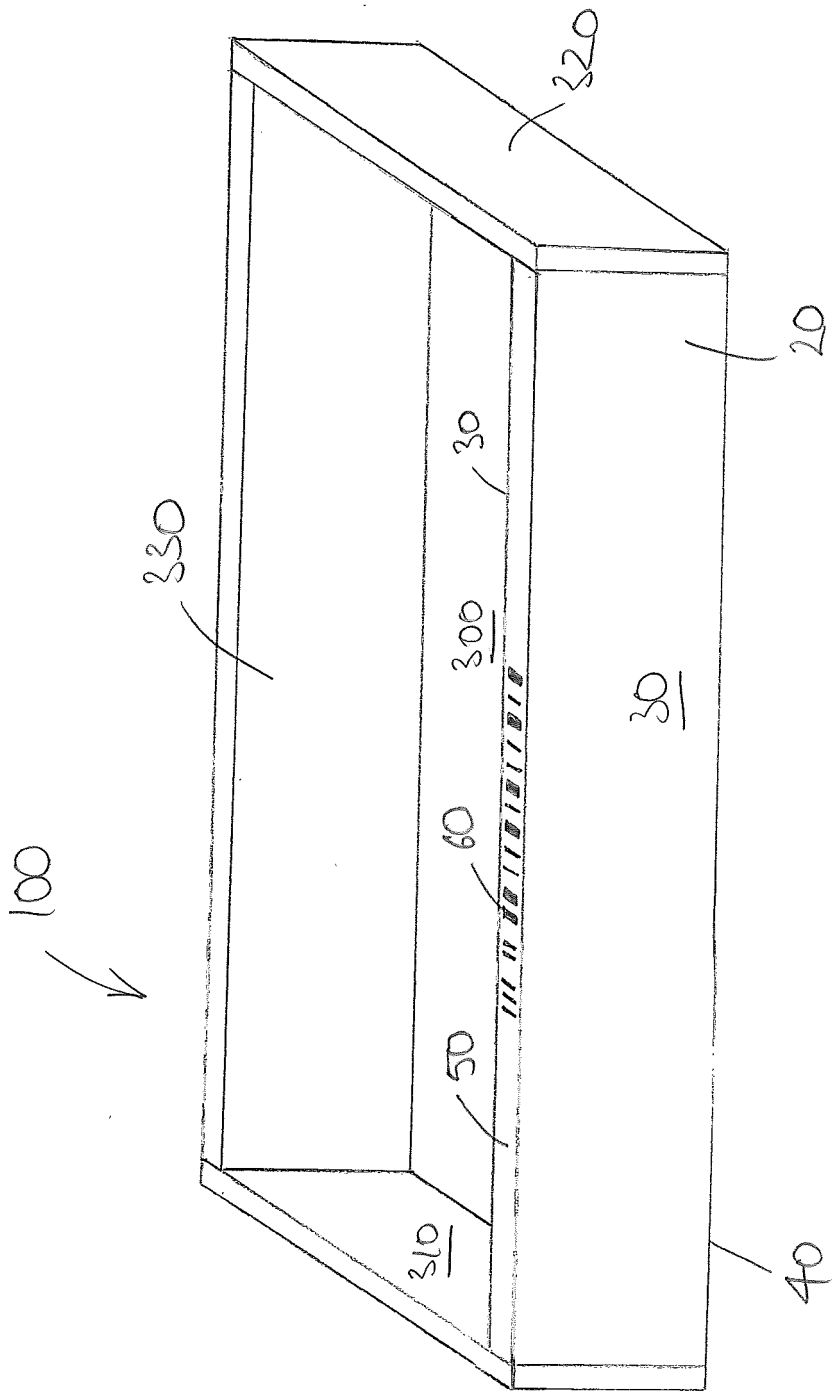

Fig 7

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EUROPEAN SEARCH REPORT

Application Number
EP 14 17 8604

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	US 4 165 002 A (MEAGHER RICHARD R) 21 August 1979 (1979-08-21) * column 5, line 57 - column 7, line 18; figures 1-6 *	1-11	INV. B65D5/42 B65D5/02
Y	WO 2014/023735 A1 (FRANK GMBH & CO KG GEB [DE]) 13 February 2014 (2014-02-13) * page 7, paragraph 3 - page 12, paragraph 1; figures 1-5 *	1-11	
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A	CA 2 260 551 A1 (MARTIN DE BLOIS DESIGNER INC [CA]) 9 August 1999 (1999-08-09) * claims 1-13; figures 1-4 *	1-11	
			TECHNICAL FIELDS SEARCHED (IPC)
			B65D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
Munich	13 February 2015	Grondin, David

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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13-02-2015

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

REFERENCES CITED IN THE DESCRIPTION

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